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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,504	10/27/2003	Tsuyoshi Matsumura	03180.0339	3147

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EXAMINER

TRAN, TAN N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4.9

Office Action Summary

Application No.

10/693,504

Applicant(s)

MATSUMURA ET AL.

Examiner

TAN N. TRAN

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 6 is/are rejected.
- 7) ☒ Claim(s) 3, 5 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Minhloan Tran

**Minhloan Tran
Primary Examiner
Art Unit 2826**

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/27/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, Species A, claims 1-7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2 are rejected under 35 U.S.C. 102(b) as being anticipated by Pang et al.

(6,177,329).

With regard to claim 1, Pang et al. discloses a underlying insulating film 110; a first sidewall insulating film 112A disposed on the underlying insulating film 110; a second sidewall insulating film 112B disposed on the underlying insulating film 110, opposite to the first sidewall insulating film 112A so as to provide a cavity between the first and second sidewall

insulating films (112A,112B) having the same height as the first sidewall insulating film 112A; and upper insulating film 134 provided over the first and second sidewall insulating films (112A,112B). (Note attachment # 1, figs. 1,18,25 of Pang et al.).

With regard to claim 2, Pang et al. discloses a central beam 134A over the first and second sidewall insulating films (112A,112B) so as to seal an upper portion of the cavity; a first side-beam 134B disposed on the first sidewall insulating film 112A having the same height as the central beam 134A; and a second side-beam 134C disposed on the second sidewall insulating film 112B and having the same height as the first side-beam 134B so as to sandwich the central beam 134A with the first side-beam 134B. (Note attachment # 1, figs. 1,18,25 of Pang et al.).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pang et al. (6,177,329) in view of Shimooka et al. (6,534,870).

With regard to claim 4, Pang et al. does not disclose a top portion width of the first sidewall insulating film contacting the upper insulating film is narrower than a middle portion width of the first sidewall insulating film spaced from the upper insulating film and a top portion width of the second sidewall insulating film contacting the upper insulating film is narrower than

a middle portion width of the second sidewall insulating film spaced from the upper insulating film.

However, Shimooka et al. discloses a top portion width of the first sidewall insulating film 12D contacting the upper insulating film 14 is narrower than a middle portion width of the first sidewall insulating film 12D spaced from the upper insulating film 14 and a top portion width of the second sidewall insulating film 12E contacting the upper insulating film 14 is narrower than a middle portion width of the second sidewall insulating film 12E spaced from the upper insulating film 14. (Note attachment # 2, fig. 4 of Shimooka et al.).

Therefore, it would have been obvious to one of ordinary skill in the art to form the Pang et al.'s device having a top portion width of the first sidewall insulating film contacting the upper insulating film is narrower than a middle portion width of the first sidewall insulating film spaced from the upper insulating film and a top portion width of the second sidewall insulating film contacting the upper insulating film is narrower than a middle portion width of the second sidewall insulating film spaced from the upper insulating film such as taught by Shimooka et al. in order to reduce the stresses of device.

With regard to claim 6, Shimooka et al. and Shimooka et al. disclose all the claimed subject matter except for the top portion width is 10nm to 30 nm narrower than the middle portion width. However, it would have been obvious to one of ordinary skill in the art to form the top portion width is 10nm to 30 nm narrower than the middle portion width in order to reduce the stresses of device.

Allowable Subject Matter

5. Claims 3,5,7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3,5,7 are allowable over the prior art of record, because none of these references disclose or can be combined to yield the claimed invention such as a bottom portion width of the first sidewall insulating film contacting the underlying insulating film is narrower than a middle portion width of the first sidewall insulating film spaced from the underlying insulating film and a bottom portion width of the second sidewall insulating film contacting the underlying insulating film is narrower than a middle portion width of the second sidewall insulating film spaced from the underlying insulating film as recited in claim 3, and the width of the first side-beam is narrower than the width of the first sidewall insulating film and the width of the second side-beam is narrower than the width of the second sidewall insulating film as recited in claim 7.

Conclusion

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tan Tran whose telephone number is (571) 272-1923. The examiner can normally be reached on M-F 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone numbers for the

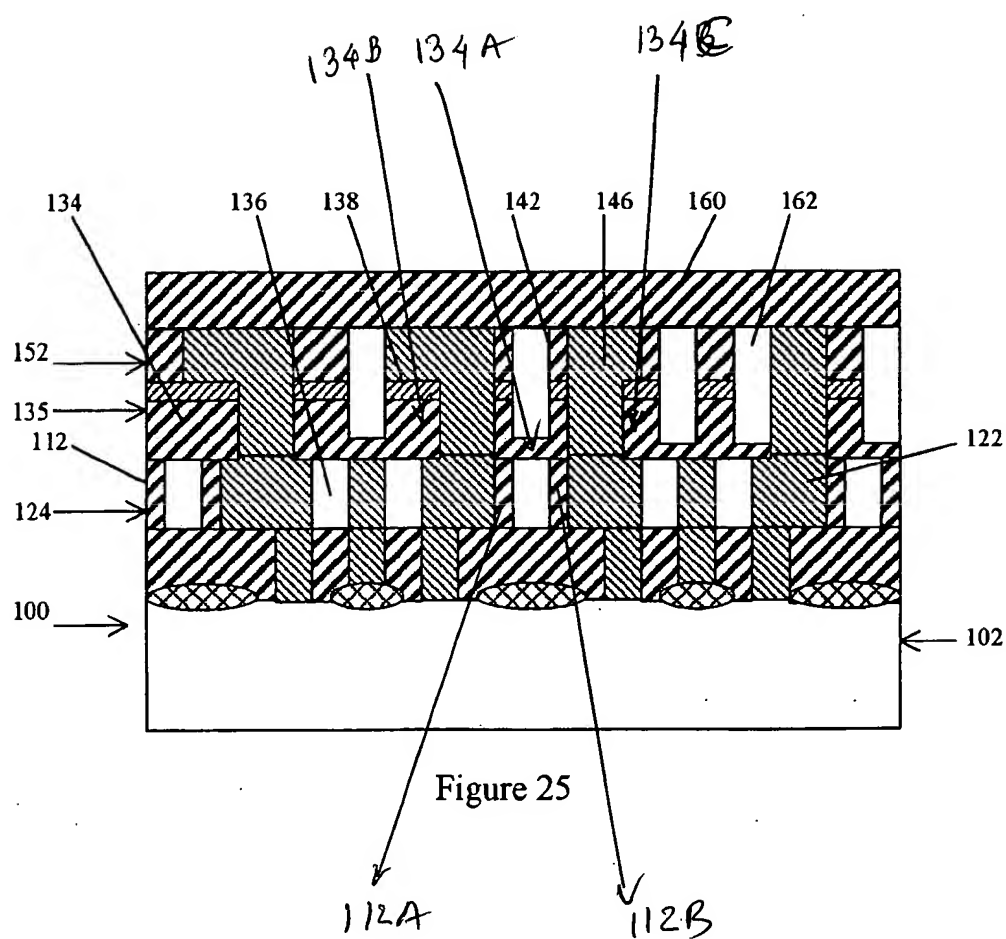
Art Unit: 2826

organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TT

April 2005



Attachment = 1

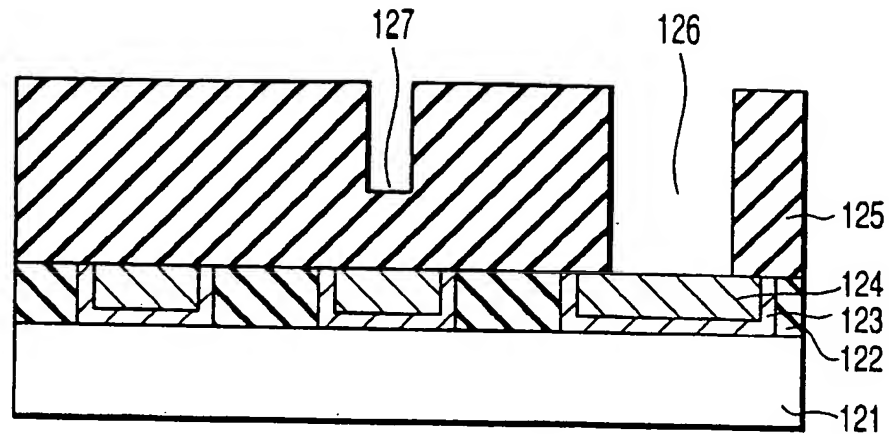


FIG. 3 PRIOR ART

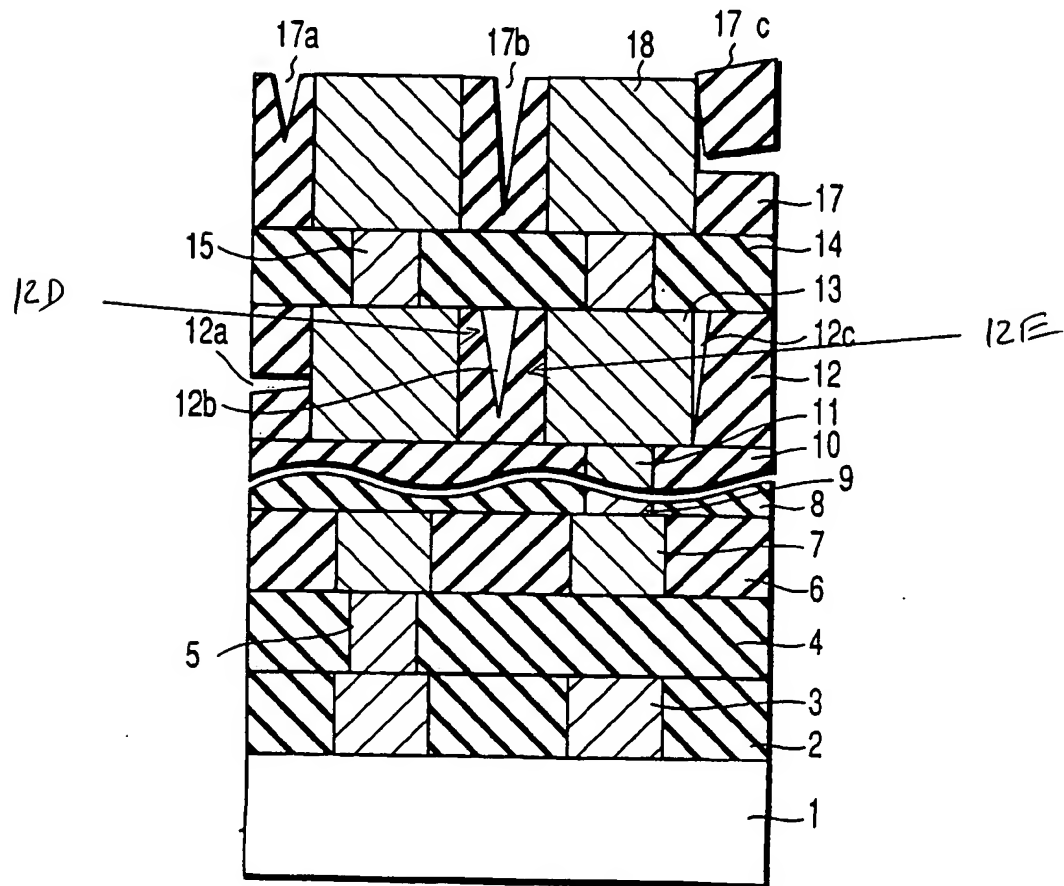


FIG. 4 PRIOR ART

Attachment # 2